TOBACCO INDUSTRY RESEARCH COMMITTEE
350 FIFTH AVENUE NEW YORK 1, N. Y.

108

Application For Research Grant

Date: July 28, 1955

1. Name of Investigator: Travis Winsor, M.D.

2. Title: Assistant Clinical Professor of Medicine, University of Southern California, Chairman, Board of Directors, Heart Research Foundation, Director, Nash Cardiovascular Research Foundation and Heart Department, Hosp. of the Good Samaritan.

3. Institution & Address: Heart Research Foundation, 3875 Wilshire Boulevard, Los Angeles 5, Cal. and The Hospital of the Good Samaritan, 1212 Shatto Street, Los Angeles 17, Cal.

4. Project or Subject: Effect of tobacco and/or its constituents upon the vascular system of man in health and in various disease states.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed): It is proposed to make measurements of the peripheral and central (heart) circulation before and after the administration of tobacco and/or its component parts. The following would be studied:

1. Digital circulation by means of measurements of volume pulsations using an electronic pneumoplethysmograph, blood flow employing a venous occlusion technique and the plethysmograph, vascular volume measured after intravenous injection of radioactive iodinated albumin 131 employing a recording gamma ray spectrometer and skin temperatures using recording thermocouples or thermisters.
2. Calf muscle circulation by means of measurements of skin temperatures, muscle temperatures and clearance rate of radioactive sodium.
3. Kidney circulation by determining renal plasma flow using para aminohippurate.
4. Blood pressure, pulse rate and cardiac output using for the latter the dilution of radioactive agents.
5. Oxygen consumption to determine the effect on body metabolism.

It is proposed to measure these modalities before and after smoking corn silk (Cubebs), standard brands, "de-nicotinized" brands, and various filtered brands of cigarettes. We are especially interested in studying the effects of chemical agents derived from tobacco other than nicotine to determine if substances favoring vasodilation can be detected.

X As tobacco smoking produces strong negative ionization of oxygen we would intend to study the effect of ionized oxygen using radioactive polonium to determine if "negative oxygen" is in itself a cause of the vasoconstriction reported from tobacco smoking.

Enclosed are reprints which describe some of the studies we have made employing methods described above.

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6. Budget Plan:

Salaries	Part-time technician	$1,000.00
Expendable Supplies		400.00
Permanent Equipment	Gamma ray spectrometer	5,500.00
Overhead		None
Other		None
Total		$6,900.00

7. Anticipated Duration of Work: One to two years.

8. Facilities and Staff Available: Staff of the Heart Research Foundation: one Fellow (M.D.), half-time; one technician, half-time; one secretary, half-time; one electronic engineer, half-time; and one photographer, part-time. Facilities and staff of the Nash Foundation also will be employed. This includes one secretary and two technicians and the use of the ~~it~~ following equipment: Two plethysmographs with recording oscillometers, two multipoint Brown potentiometers, a temperature-controlled room with controlled humidity and air flow, oxygen ionizers and thermister thermometers.

9. Additional Requirements: We will require chemical agents isolated from tobacco and tobacco prepared by various methods for study. We would need nicotine in its ~~as~~ chemical state. It would be our intention to obtain these agents through chemists associated with your organization.

10. Additional Information (Including relation of work to other projects and other sources of supply): This work would be carried on in conjunction with studies currently being carried out on vasomotion and factors regulating blood flow to the periphery.

We would greatly appreciate your consideration of this project as we are planning our program for the coming year.

Sincerely,

s/ Travis Winsor, M.D.

Signature
Director of Project: s/ Travis Winsor, M.D.

s/ Wiley Winsor

Business Officer of the Institution: s/ Wiley Winsor

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